



Energy Smart Services

solutions &
incentives for
business

SECTION 2

FINANCIAL INCENTIVES FOR ECM INSTALLATION



- Seattle City Light offers generous financial incentives to promote the use of energy efficient technologies in medium to large businesses. Incentive amounts for Energy Conservation Measures (ECMs) are based on the amount of energy saved, and can range as high as 70% of the installation cost.
- For very straightforward technologies, City Light offers **Simple Rebates**: flat per unit amounts that make for fast and easy projects.
- Customers interested in commonly implemented HVAC, motor and lighting upgrades can participate in **Standard Incentives**. These take advantage of City Light's Funding Calculation Worksheets: simply enter data regarding the existing and proposed system and the worksheet calculates the savings and incentive amount.
- Finally, for those large or complex projects that don't fit the previous models, City Light staff will help craft **Custom Incentives** specific to the customer's situation. City Light's Energy Management Analysts work closely with customers to make it easy to find cost-effective, energy-saving solutions that meet their needs.

Section 2.

Financial Incentives for ECM Installation

General

- Incentive Levels
- Financial Incentives for ECM Installation—Steps to Participate
- Checklist for Customers and Trade Allies
- Standard Specifications for All ECM Installation Incentives

2A. Simple Rebates

2B. Standard Incentives for Lighting

- Instructions
- Worksheets
- Standard Specifications
- Lighting Waste Disposal Form

2C. Standard Incentives for HVAC and Motors

- Instructions
- Worksheets
- Standard Specifications

2D. Custom Incentives

Incentive Levels

Energy Smart Services incentive levels are based on savings realized during the first year after an Energy Conservation Measure is installed. The following funding factors are automatically incorporated into the Funding Calculation Worksheets for Standard Incentives. For Custom incentives, the service life of the measure and corresponding funding factors are more important: see *Section 2D* of this manual. Many factors must be considered in arriving at a total incentive amount, such as the selection of the appropriate baseline, determination of the annual operating hours, and consideration of possible Energy Smart Services Cost Caps. The figures below are for general reference only and are subject to change.

Examples of Measures Funded	Incentive Amounts (applied to first-year energy savings)
New Lighting Fixtures T-8 fluorescent with electronic ballasts Metal halide High-pressure sodium Exit Signs*	13¢ per kWh saved—except 14¢ cents in new const. 13¢ per kWh saved—except 14¢ cents in new const. 13¢ per kWh saved—except 14¢ cents in new const. \$30 per sign
Retrofit Lighting T-12 to T-8 fluorescent Incandescent to fluorescent Exit Signs*	10¢ per kWh saved 10¢ per kWh saved \$20 per sign
Controls HVAC Central Lighting Daylighting Controls Occupancy sensors—wall mount* Occupancy sensors—ceiling mount*	17¢ to 20¢ per kWh saved 21¢ per kWh saved 17¢ to 20¢ per kWh saved \$30 per sensor \$90 per sensor
HVAC Equipment Chillers Air Conditioners Air-to-air heat pumps Hydronic heat pumps Variable speed drives for fans	23¢ or 29¢ per kWh saved 20¢ per kWh saved 20¢ per kWh saved 23¢ per kWh saved 23¢ per kWh saved
Efficient Transformers	23¢ per kWh saved
Motors Process loads Non-process loads	15¢ per kWh saved 23¢ per kWh saved

* Simple Rebates

Financial Incentives for ECM Installation– Steps to Participate

This section describes the basic steps required to receive funding for the installation of energy efficient equipment. Customers interested only in Simple Rebates should skip to Section 2A, where streamlined procedures are described.

Please note: In order to be eligible for funding the customer **must** have a contract with Seattle City Light before equipment is ordered.

1. Application

The customer submits an *Application for Service* and an Energy Management Analyst is assigned to the customer.

2. Project Development

The customer may initiate the development of a project in one of two ways: 1) ask City Light for a Facility Assessment or Energy Analysis Assistance to scope out and identify applicable Energy Conservation Measures, or 2) come to City Light with a request for funding for specific measures the customer has already developed. The Energy Management Analyst either develops the energy savings estimates or reviews estimates from another party. The owner then obtains bids for the Energy Conservation Measures.

If a customer or Trade Ally has a specific proposal in mind and wants to find out how much funding might be available, they should first determine whether the proposed Energy Conservation Measures fall under Simple Rebates, Standard Incentives, or Custom Incentives. If they fall under Simple Rebates or Standard Incentives, the appropriate *Funding Calculation Worksheets* can easily be filled out to estimate the available funding. Once a bid or cost estimate is obtained, a contract can be drawn up.

If the proposed measure doesn't fall under Simple Rebates or Standard Incentives, a bid and a clear description of what is being proposed will need to be provided to Seattle City Light, in which case Seattle City Light will provide a customized estimate of savings and funding. Alternatively, the customer can submit an estimate of savings and funding to be reviewed and possibly revised by Seattle City Light. Because levels of savings and funding sometimes depend on highly specific details or control setpoints, the level of funding cannot be calculated until the proposed measures are well defined.

For technologies that are unproven or difficult to analyze using standard energy savings engineering calculations, Seattle City Light may offer a contract for which the payment amount will be determined in part by the measured performance of the equipment once it's installed. This type of contracting is called "pay for performance."

3. Paperwork for an ECM Installation Contract

The following paperwork must be submitted to Seattle City Light by the customer to initiate an ECM installation contract (except that the estimate of energy savings may be developed by City Light).

- The initial **application**, filled out by the customer or trade ally.
- A completed **Contract Request Form**. After the project has been fully developed, the customer fills out this form to provide additional details necessary to write a contract, such as contact information and signing authorization.
- An **estimate of energy savings**, prepared by a Trade Ally or Seattle City Light Energy Management Analyst. For Standard Incentives or Simple Rebates, the calculation of savings is simply submitted on the appropriate *Funding Calculation Worksheets*. These forms can be downloaded at www.EnergySmartServices.com, or obtained from Seattle City Light by calling (206) 684-3254. For Custom Incentives, the energy savings calculations are customized in a report. See Section 2D—*Custom Incentives* for more detail.
- The **accepted bid** for the project, including cut sheets or manufacturer's literature demonstrating compliance with Seattle City Light *Standard Specifications* and any performance data entered into the project's *Funding Calculation Worksheets*. The bids are prepared by contractors and submitted to the customer for review before the customer submits them to Seattle City Light. If competitive bids have been solicited for the project, **all bids** should be submitted with the accepted bid. If a project is to be installed with the customer's in-house labor, the customer may submit a budget rather than a bid.
- For lighting projects, a **drawing or sketch of fixture locations** prepared by a Trade Ally.

Normally, a bid and cut sheets are submitted prior to contract. In some cases, a contract will be issued before bids and equipment have been selected. In that case, the customer should provide bids and cut sheets to Seattle City Light before equipment purchase.

The customer is encouraged to solicit three bids and select the lowest. Otherwise the customer submits a justification for his bid selection and the Energy Management Analyst reviews the proposed per-unit costs for comparability to per-unit costs on similar previous projects to establish the costs that will be the basis for Seattle City Light incentive calculations.

4. Seattle City Light Review

Once the above paperwork is completed, the Energy Management Analyst reviews the savings and funding calculations for accuracy and completeness, and a Seattle City Light contract is initiated. For existing facilities, the Energy Management Analyst performs a "pre-inspection" of the site to ensure that descriptions of existing equipment are accurate.

5. Contract Execution

The Energy Smart Services financial incentives contract details the amount of funding provided, the project cost, kWh/year savings and project specifications. Seattle City Light mails two copies of the contract to the customer for signature. The customer signs both copies of the contract and returns them. Seattle City Light then signs both copies, keeping one and returning the other to the customer. Equipment may be ordered only after the contract has been signed by Seattle City Light and returned to the customer. *The customer is responsible for making sure that design consultants and contractors are aware of Seattle City Light contract requirements and that any design documents developed outside the Energy Smart Services contract are consistent with the specifications in that contract.* The customer signs a separate contract with the contractors who will do the work. The customer should seek prior written approval from the assigned Energy Management Analyst before making changes to the project, since changes to the project are likely to reduce Energy Smart Services funding.

6. Inspection and Payment

Upon completion of the installation, the customer calls Seattle City Light to schedule an inspection and provides the documentation required in the Seattle City Light contract, including invoices for funded Energy Conservation Measures. Payment is issued upon verification of contract compliance on the basis of on-site inspection and review of required documentation. If Energy Conservation Measures do not comply with the contract at the first inspection, the customer coordinates the contractor's work to correct the deficiencies, and then schedules a re-inspection and sign-off.

On pay-for-performance contracts, where the funding level is directly dependent on measured performance, the performance measurements are made as part of the inspection.

7. Maintenance of Equipment

The contract includes the requirement that the customer continues to operate and maintain the equipment over its service life. Seattle City Light is investing significant dollars and resources into energy conservation projects and wishes to ensure the estimated savings are realized.

Financial Incentives for ECM Installation Checklist for Customers and Trade Allies

This checklist summarizes key deliverables during the course of a project. For detailed information about submittals that will be required for payment, please see Program Manual *Standard Specifications* sections. If a contract has already been signed, please refer to the contract requirements.

Routing of Information:

- ☐ Documents are submitted by the customer to Seattle City Light

Timing for Proposal:

- ☐ Submit proposal at least one month before equipment is ordered

Documents to Submit for a Seattle City Light Contract:

For All Projects:

- ☐ *Application for Service*
- ☐ *Contract Request Form*
- ☐ Trade Ally's itemized bid or authorized signature on the Project Proposal Sheet(s)
- ☐ Catalog cut sheets
- ☐ Floor plan or sketch of proposed installation

For Standard Incentives:

- ☐ Completed *Funding Calculation Worksheets*, in electronic form

After Installation is Complete, Please Submit:

- ☐ Invoices
- ☐ *Lighting Waste Disposal Form* (for lighting projects)

Standard Specifications for All ECM Installation Incentives

Energy conservation measure installations must comply with these specifications in order to qualify for Energy Smart Services funding. These specifications may be edited by Seattle City Light as necessary to apply to a specific project. In order to receive funding under this contract, a funding contract must be signed by Seattle City Light and the customer before the customer orders equipment.

1. Permits, Codes, and Regulations

Projects shall comply with all applicable Federal, State, and local codes and requirements, including but not limited to all applicable environmental requirements and all mechanical, electrical and building codes.

In the event work on the project disturbs asbestos or other hazardous materials, proper measures must be taken to ensure the safety of building occupants and to contain and/or remove and dispose of the materials in accordance with Federal, State, and local regulations.

If ventilation is directly affected by this project, the installation shall meet ASHRAE ventilation standard 62-89 or another applicable ventilation code or standard.

For buildings 45 years old or older, the Participant is responsible for contacting the State Office of Archaeology and Historic Preservation to ensure that the installation will be in compliance with historic building requirements. Phone (360) 586-3065 for information.

If a refrigerant is removed, it shall be recycled or disposed of in accordance with applicable regulations.

Helpful Phone Numbers:

- Business Waste Line (206) 296-3976
- Puget Sound Clean Air Agency (206) 343-8800
- State Dept of Ecology- NW Regional Office (425) 649-7000
- EPA Office of Waste and Chemicals Mgmt. (206) 553-1847

2. Equipment and Installation

Funded equipment must be clearly marked at the factory with the manufacturer and the model number in a manner that permits the use of manufacturer's literature to determine efficiency ratings.

All equipment shall carry a safety certification by an approved testing laboratory (UL, ETL, etc.) in an appropriate category.

Back-up equipment is not eligible for funding unless the back-up and lead (non-back-up) equipment is switched periodically. If the back-up and lead equipment are switched periodically,

the backup equipment and the lead equipment are each eligible for funding using half the annual kWh savings estimated for year-round use of either one.

3. Submittal Requirements

Submittals are to be addressed by the contractor to the customer.

The customer shall provide Seattle City Light with copies of the following prior to payment (except where noted that only the owner is required to have a copy):

- Itemized **invoices** broken down, at least, by Energy Conservation Measure.
- If the new equipment includes any controls: submit the **as-built sequences of operation** for the new equipment and a schematic drawing showing the locations of all new sensors. If the controlled values are measured by an energy management control system, submit a trend log demonstrating compliance with any setpoints and sequences given in these specifications. Compliance with setpoints is demonstrated by trending the setpoint and the measured actual value so the two can be evaluated and compared. All trend logs shall have the points (columns) clearly labeled and explained, shall run for at least five days, with data logged once every hour, and shall include the outside air temperature (for HVAC trends), date, and time. Each line of the trend log shall include at least 4 columns of data in addition to the date and time unless fewer than 4 data points are being trended. *Exception: This paragraph does not apply to occupancy sensors, photocells, or central lighting controls.*
- **Cut sheets** for any equipment that was not documented in the manufacturer's literature submitted with the bid. Cut sheets shall include all information required to demonstrate compliance with these specifications.
- An **as-built** version of the *Funding Calculation Worksheets* if changes have been made to a project funded under a Standard Incentive.
- A copy of the Project Summary Form signed by the customer.

The following as-built documents are to be left with the owner prior to Seattle City Light inspection. No copy is required for Seattle City Light:

- **Operation and Maintenance Manuals.** The O&M manual shall include warranties for all installed equipment, and all information required to maintain, operate, and where appropriate calibrate or program the installed equipment. Manufacturer's literature shall be marked to clearly identify the correct manufacturers and model numbers. The manual shall either be a three ring binder or some other type of notebook. On the cover, include the project name, customer name, date, and contractor name and address.
- Signed-off copies of any required DCLU **permits**.
- **As-built versions of the design specifications and drawings** (if design costs were included in the Energy Conservation Measure cost).

Seattle City Light does not review design documents for accuracy, and takes no responsibility for any aspect of the design. However, if design costs were included in the Energy Conservation Measure cost, the Energy Management Analyst checks that design documents for the measure have been completed and provided to the customer. If the design costs are included as part of the measure's costs, the design documents must be stamped by a Professional Engineer (P.E.).

4. Inspections

Upon project completion and submittal of required pre-payment documentation, the customer shall contact the Energy Management Analyst to schedule an inspection. If the Energy Management Analyst will not be able to reach the equipment and read the nameplate after installation, the customer shall schedule a progress inspection of the equipment on site **before** the equipment becomes inaccessible.

Seattle City Light will inspect the installation for the following:

- Equipment installation is complete and fully operational.
- Any Operations and Maintenance Measures (O&Ms) covered by the contract have been completed.
- The customer demonstrates familiarity with proper equipment operation and ability to review and change control setpoints and schedules.
- The as-built documents required under this contract to be provided to the customer are complete.
- Control setpoints and programming are consistent with any Seattle City Light contract requirements.
- All required permits have been approved and are posted on site at the time of the Seattle City Light inspection.

5. Payment

Payment is issued to the customer once contract compliance has been verified on the basis of submittal review and inspection. If deficiencies are identified during the post-installation inspection and submittal review, the customer is responsible for coordinating with the contractor until the deficiency is corrected, including sending in a new set of submittals or scheduling another inspection as needed. If the invoices or site observations indicate non-compliance with contract requirements, the funding level will be adjusted to reflect the actual installation.